

[54] **METHOD FOR MOLDING CANDLES OF VARYING CONFIGURATION**

[76] Inventors: **James W. Powers**, 5010 S.E. Britton St., Milwaukie, Oreg. 97222; **Roger L. Manning**, 275 N. Shore Ave., Lake Oswego, Oreg. 97034

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[51] Int. Cl. **C11c 5/02**, B28b 7/02, B28b 7/20

[58] Field of Search 249/157, 142, 104, 49; 425/803; 264/219, 275

[56] **References Cited**

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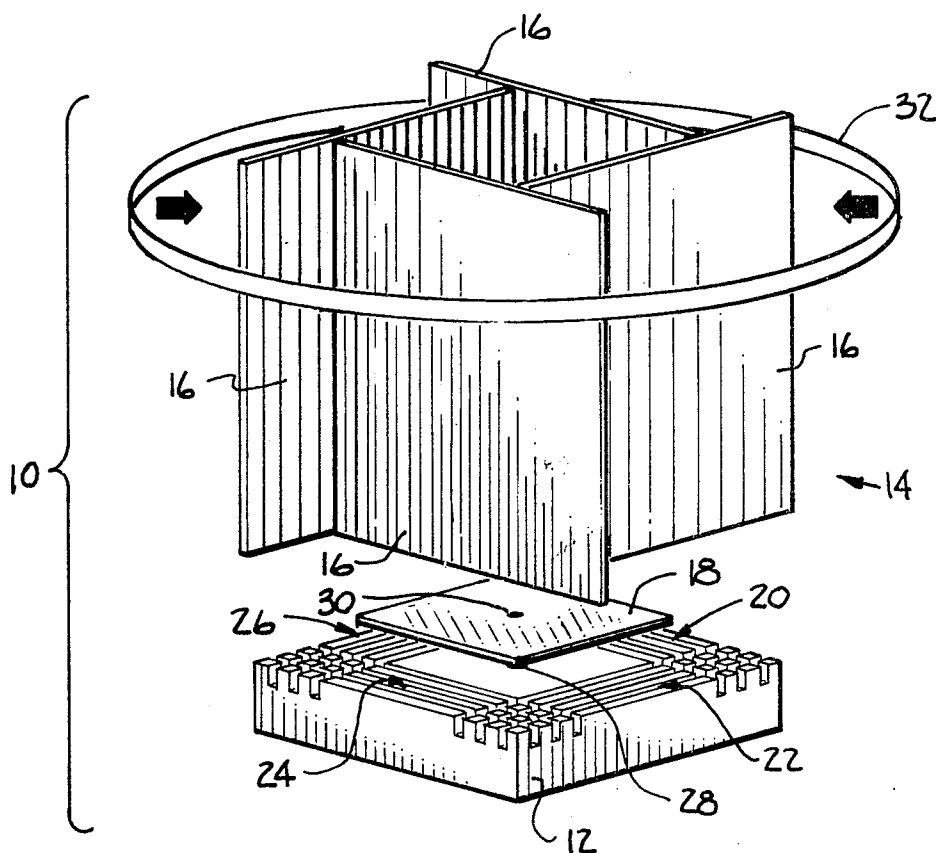
Primary Examiner—Robert D. Baldwin
Attorney, Agent, or Firm—Chernoff & Vilhauer

[57] **ABSTRACT**

A method of utilizing adjustable candle-making appa-

ratus intended primarily for home use and adaptable for molding candles of varying size, shape and artistic surface design. The molding apparatus comprises a flat horizontal base having two spaced sets of elongate parallel grooves formed in its upper surface intersecting two other such sets of grooves at right angles. Four flat wall panels are provided, each adaptable to be seated in upright position in a pre-selected groove of one of the sets so as to form a vertical mold enclosure of variable rectangular cross-section, the cross-sectional size and shape of the enclosure being dependent upon the combination of grooves selected for seating the respective panels. Each panel has a width at least as great as that needed to form the largest wall of the largest contemplated mold enclosure so that the same four panels may be used to form all possible mold configurations. Differently shaped insert pieces are provided which may be variably positioned inside the wall panels to give the craftsman an opportunity for forming a selective variety of carved or patterned designs on the surface of the candle. Certain of the insert pieces have sculptural impressions formed thereon for forming especially artistic figures, while other insert pieces are useful for forming candles of other than square or rectangular cross-section.

6 Claims, 8 Drawing Figures



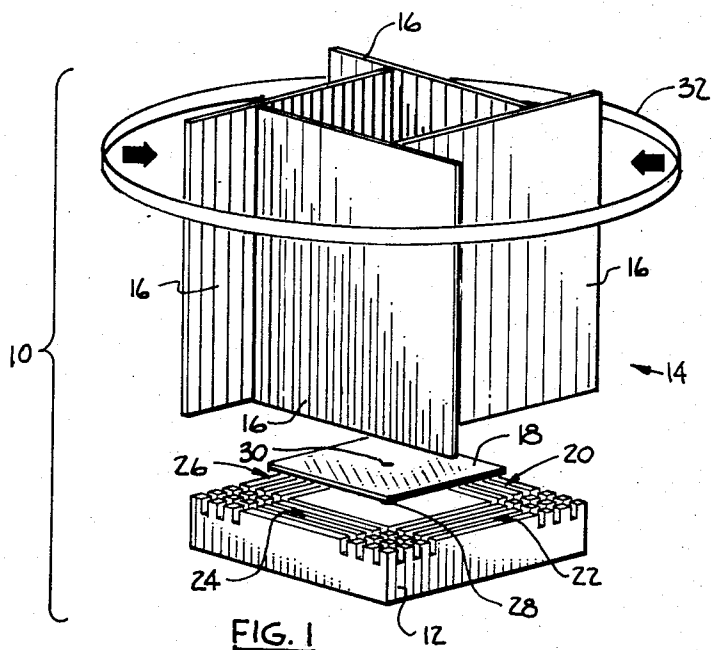


FIG. 1

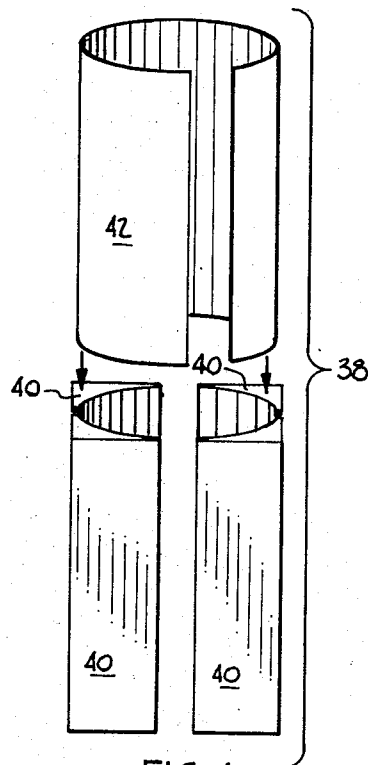


FIG. 6

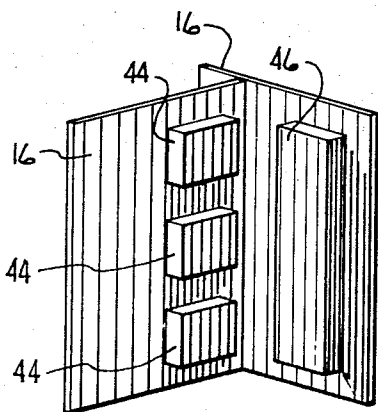


FIG. 2

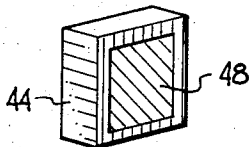


FIG. 2A

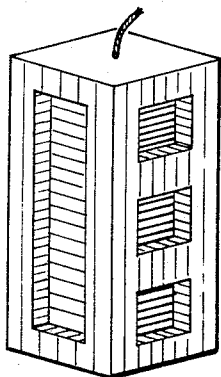


FIG. 3

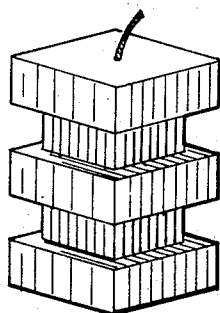


FIG. 3A

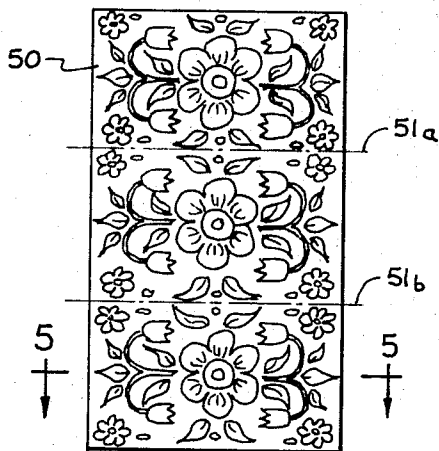


FIG. 4

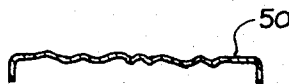


FIG. 5

METHOD FOR MOLDING CANDLES OF VARYING CONFIGURATION

BACKGROUND OF THE INVENTION

This invention relates to improvements in apparatus and method for fabricating candles in the home. More specifically the apparatus is of a highly adjustable type for molding candles of widely varying physical configuration and artistic appearance while requiring a minimum of component parts to achieve such variations.

The present trend toward increased leisure time has influenced the lives of a great many people in this country, with the result that ever-increasing numbers of the population are actively pursuing hobbies as an outlet for their energies. An increased interest in the field of arts and crafts has been an inevitable consequence of this trend, so that it is not surprising now to find a burgeoning demand for equipment and materials needed for artistic or other creative pursuits. One time-honored art which one would expect to be a natural beneficiary of this growing interest is the art of candle making. Unfortunately, however, inexpensive candle making equipment of the type currently available on the market and suitable for home use has invariably lacked the high degree of versatility required to enable persons to exercise any appreciable degree of creativity in the molding of candles, which deficiency has in turn hampered the development of interest in the candle-making art. For example, kits are available wherein separate molds of different configurations are provided to permit the formation of candles having different sizes and shapes, but since a separate mold must be provided for each individual candle shape the overall bulk and cost of the kit is multiplied by each incremental gain in versatility. Thus marketing considerations have forced the degree of versatility to be kept at a low level. In addition, no means are provided for permitting any appreciable exercise of the craftsman's individual creative skills by allowing him, for example, to form his own unique surface designs, patterns or configurations on the candle. Accordingly the craftsman finds his opportunity to create severely limited by the disappointing lack of versatility in his equipment, and consequently loses interest in the art.

SUMMARY OF THE PRESENT INVENTION

The present invention is directed to an adjustable candle mold which, although extremely simple in construction and having relatively few component parts, possesses a high degree of versatility not heretofore provided in home candle-making equipment. Inherent in the use of the apparatus is a candle-molding method which is also unique.

Essentially the mold comprises a flat base portion having a plurality of grooves formed in its upper surface for supporting the bottom edges of a group of adjustable wall panels which form the sides of the candle mold. By adjustably seating the wall panels in different selected ones of the grooves, mold enclosures of different cross-sectional sizes and shapes can be formed using the same base and the same wall panels. The different candles formed by the mold may also be produced with a wide variety of carved or sculptural surface designs through the use of differently shaped insert pieces which may be positioned in any desired pattern or combination inside the wall panels. The insert pieces may be positioned either by removably adhering them

to the insides of the wall panels or, alternatively, by successively placing them in position as the candle is poured. Some of the inserts are preferably provided with sculptural artistic designs which produce unusual reliefs on the surface of the candle. Other inserts will produce cylindrical or various other shaped candles. All candle configurations may be poured to variable heights, thereby providing an almost endless assortment of different candle forms.

Because of the high degree of variability made possible by the grooved base and adjustable wall panels, only one basic mold need be provided to form all of the various candle configurations contemplated, as opposed to the multiple molds required in prior art candle forming devices. This universal adaptability of the mold minimizes the number of component parts required to achieve high versatility and thereby greatly enhances both the marketability and utility of the device. The particular construction of the base, which provides an array of grooves capable of seating and holding the respective wall panels in variable positions, also contributes to the simplification of the mold while permitting extremely quick and easy assembly and disassembly. Finally, the provision of insert pieces of different shapes and sizes adaptable for variable selective placement within the mold wall panels in virtually any pattern chosen by the craftsman provides the opportunity for creative expression heretofore lacking in candle molding equipment available for home use, and provides the craftsman with the incentive needed to attract and retain his interest in the art.

The foregoing and other objectives, features and advantages of the present invention will be more readily understood upon consideration of the following detailed description of the invention taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an exploded perspective view of the basic adjustable candle mold, illustrating the grooved base, bottom plate, adjustable wall panels and band for securing the top of the panels.

FIG. 2 is a perspective view of the interior of two wall panels with respective insert pieces positioned for forming a carved relief pattern on the surface of a candle.

FIG. 2A is a perspective rear view of a typical insert piece shown with an adhesive material for affixing the piece to a wall panel.

FIG. 3 is a perspective view of a candle with a carved relief pattern formed from insert pieces placed in accordance with FIG. 2.

FIG. 3A is a perspective view of a different candle configuration typical of many such configurations obtainable using the apparatus herein.

FIG. 4 is a front view of a typical insert piece adaptable for reproducing a sculptural impression on the surface of a candle.

FIG. 5 is a sectional view taken along lines 5—5 of FIG. 4.

FIG. 6 is an exploded perspective view of a group of insert members adaptable for forming cylindrical candles.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The adjustable candle mold, shown in its most basic

form, is designated generally as 10 in FIG. 1 and comprises a grooved base 12, an adjustable mold wall 14 comprising individual wall panels 16, and a bottom plate 18. Formed in the top of the base 12 are multiple grooves grouped into four sets 20, 22, 24 and 26 respectively, each set comprising three elongate straight parallel grooves. Two of the sets, 20 and 24, are arranged parallel to one another while the other two sets 22 and 26 intersect sets 20 and 24 at right angles. The individual grooves of the various sets are equally spaced from one another, as are also the respective parallel sets of grooves. Thus certain combinations of the grooves join together to form differently sized square figures on the surface of base 12, while other combinations join together to form oblong rectangular figures. An aperture 28 extends through the base 12 for fastening one end of a candle wick preparatory to pouring a candle in the manner to be described hereafter.

Each of the wall panels 16 is of flat, rectangular shape and is of a thickness just slightly smaller than the width of the respective grooves formed in the base 12, so as to permit the wall panels 16 to be seated tightly in respective pre-selected grooves and thereby held firmly in vertical position. Each of the wall panels 16 has a width at least as great as the distance between the outermost grooves of two parallel sets of grooves, for example the distance between the outermost grooves of sets 20 and 24 respectively. Thus if each wall panel 16 is seated in a respective outer groove of each of the four sets 20, 22, 24 and 26, a vertical mold enclosure is formed having a square-shaped cross-section corresponding to the square figure formed by the intersection of the four outer grooves. Alternatively, if the wall panels 16 are each seated in an intermediate groove of the respective sets 20, 22, 24 and 26, a vertical mold enclosure of smaller square cross-section will result. To achieve such smaller mold configuration utilizing the same four wall panels 16, it is necessary only to position the panels in offset relationship to one another as shown in FIG. 1, so that one edge of each panel abuts the side of an adjacent panel at right angles thereto, with the unused portion of each wall panel extending outwardly from each corner.

If, instead of a square cross-section, a mold enclosure having an elongate rectangular cross-section is desired, it is necessary only to seat the respective wall panels 16 in non-corresponding grooves of each set. For example if two opposite wall panels are seated in the innermost grooves of sets 20 and 24, and the other two panels are seated in the outermost grooves of sets 22 and 26, a mold of oblong rectangular shape will result. With the particular configuration of grooves illustrated in FIG. 1, wherein each set comprises three parallel grooves, the number of different possible mold cross-sections includes three sizes of squares and six differently shaped oblong rectangles. Obviously an increased number of grooves produces a substantially greater number of variations.

For any mold configuration other than that formed by seating the respective wall panels 16 in the innermost grooves of each set, there will be one or more exposed grooves falling within the wall panels. It is of course undesirable to have any such grooves exposed to the interior of the mold since the finished candle will then contain a ridge corresponding to the location of such exposed grooves. Accordingly a plurality of bottom plates such as 18, having different shapes corre-

sponding to the various cross-sections of all but the smallest mold configuration are provided for inserting within the wall panels adjacent the base 12 to cover the otherwise exposed grooves. Each bottom plate 18 has an aperture 30 formed therein corresponding to the placement of the aperture 28 in the base 12.

Although the grooves formed in the base 12, if they are cut deep enough and sized properly, will hold the wall panels 16 in proper vertical position with the respective panels joined together tightly, it is preferable to provide some means removed from the grooves and located near the top of the wall panels to hold them together and thereby insure that no spreading occurs due to pressure resulting from the pouring of the candle. A simple expedient for accomplishing this purpose is to provide a heavy elastic band such as 32 which may be stretched around the tops of the panels after they are in position.

It should be noted that arrangement of the respective grooves on the surface of the base 12 in square and rectangular patterns is not the only possible practicable arrangement. In addition, various other polygonal arrangements, e.g., triangular or hexagonal, either superimposed upon the rectangular patterns shown in FIG. 1 or formed in the opposite side of the base 12, might be desirable. A variable triangular arrangement would require three sets of intersecting grooves and three wall panels rather than four, while a variable hexagonal pattern would require six sets of grooves and six wall panels.

A cylindrical mold configuration may be achieved by use of an insert assembly such as 38 shown in FIG. 6. Such assembly comprises four insert pieces 40, each having flat surfaces for abutting the inner surfaces of the respective wall panels 16 and including an inner arcuate surface for forming candles of cylindrical or partially curved surface configuration. To avoid the undue formation of multiple seams on the surface of a cylindrical candle due to the respective joints between the insert pieces 40, a thin flexible lining such as 42 may be placed inside the curved insert pieces so as to cover the joints. As an alternative to the foregoing method of molding cylindrically shaped candles, multiple concentric circular grooves of varying diameter might be formed in the base 12, but a different cylindrical wall would then be required for each different mold diameter.

Supplementing the versatility of the candle mold beyond that made possible by the variable shape and size of the mold enclosure, a variety of insert pieces are provided adaptable to be placed in variable positions against the interior surfaces of the respective wall panels 16. Some of the insert pieces are of various prismatic shapes, such as 44 and 46 shown in FIG. 2, so that when positioned against the interior of the wall panels in variable patterns or combinations selected by the craftsman, they form unique carved effects in the surface of the molded candle. For example FIG. 3 illustrates a relief pattern formed in two sides of a candle by the placement of insert pieces 44 and 46 in accordance with FIG. 2. A multitude of other relief patterns are also possible, such as that depicted in the candle of FIG. 3A formed by closed lateral arrangement of prismatic pieces of the type shown in FIG. 2.

The placement and support of the insert pieces may be accomplished in one of several alternative manners. Each insert piece may be provided with an adhesive

backing 48 (FIG. 2A) which permits the piece to be temporarily adhered to the respective wall panel during pouring of the candle, and later removed so that it may be reused. Such adhesive may be of any conventional type, the holding power of which is not adversely affected by exposure to moisture or temperatures approximating the melting point of candle wax. A tape with suitable adhesive on both sides might be used for this purpose. Alternatively, insert pieces with no adhesive could be used, but in order to position such pieces the candle would have to be poured in courses. For example to achieve the candle configuration of FIG. 3 a bottom layer of wax would have to be poured and allowed to harden sufficiently to support the weight of the bottom insert piece 44 and the piece 46, after which such pieces could be positioned atop the bottom layer of wax in abutment with the wall panel 16. Thereafter additional wax would be poured covering the lower piece 44 until the level for placement of the next higher insert piece 44 is reached. Thereafter the wax would be permitted to harden until it could support the next higher insert piece 44, and so on.

In addition to the prismatic insert pieces exemplified by 44 and 46, it is also desirable to provide certain insert pieces having sculptural impressions pre-formed thereon, such as insert piece 50 shown in FIGS. 4 and 5. Such sculptural impressions may take the form of human or animal figures, flowers or other plant life, pictorial representations etc. The insert pieces are preferably constructed of pre-formed plastic film and may, if appropriate, contain artistic patterns arranged so as to be optically divisible along certain imaginary lines such as 51a and 51b without thereby splitting the individual components of the patterns. This feature permits candles to be poured to different incremental heights corresponding to such imaginary lines of division without adversely affecting the appearance of the pattern. Each sculptural insert piece may alternatively constitute only a single component of an overall artistic pattern, to be arranged according to the craftsman's choosing, for example a single flower intended as part of an array of flowers. The provision of such sculptural insert pieces contributes significantly to the beauty and uniqueness of the candles obtainable by utilizing the adjustable mold of the present invention.

The material from which the component parts of the adjustable mold are constructed is preferably a smooth-surfaced, heat resistant plastic of substantial rigidity. Such material lends itself most readily to inexpensive fabrication and resultant low price to the customer, thereby contributing to the overall marketability of the mold.

In use, the mold 10 is assembled in the manner described above to provide a mold enclosure having the particular cross-sectional shape and size desired by the craftsman. Insert pieces are placed as desired, and a

candle wick is inserted through the aperture 28 in the base 12 and knotted to prevent its being pulled into the mold enclosure. The other end of the wick is tied tautly to a dowel (not shown) supported atop two opposing wall panels 16 so as to span the distance between them. The wick thus extends axially substantially through the center of the mold enclosure. After the candle is poured and solidified, the mold is disassembled. The bottom end of the candle during the pouring process then becomes the top, since shrinkage makes the opposite end unsuitable for the purpose.

The terms and expressions which have been employed in the foregoing abstract and specification are used therein as terms of description and not of limitation, and there is no intention, in the use of such terms and expressions, of excluding equivalents of the features shown and described or portions thereof, it being recognized that the scope of the invention is defined and limited only by the claims which follow.

We claim:

1. A method of molding candles which comprises:

- a. providing a base having a central aperture and a plurality of intersecting longitudinal grooves formed in the upper surface thereof, said grooves being positioned so as to form a plurality of closed geometric figures of different sizes and shapes;
- b. providing a flat bottom plate having the same shape as a selected one of said geometric figures and including an aperture corresponding in location to that of said central aperture;
- c. forming a mold enclosure of variable cross-sectional size and shape on said base by adjustably attaching flat upright wall panels in a pre-selected set of said grooves;
- d. stretching a wick through said apertures and tautly securing same adjacent said base and centrally above said wall panels; and
- e. pouring molten wax into said mold enclosure to form a candle having a pre-selected size and shape.

2. The method of claim 1, further including placing a plurality of insert pieces, adapted for variable placement against said wall panels, into abutment with the interior of said wall panels thereby forming a variable internal configuration on said panels.

3. The method of claim 2 including placing said insert pieces so that they protrude inwardly from said wall panels.

4. The method of claim 2 including placing said insert pieces in abutment with one another to form said configuration.

5. The method of claim 2 including adhering said insert pieces to the interior of said wall panels to thereby hold said pieces in position while said candle is poured.

6. The method of claim 2 wherein said insert pieces are of prismatic shape.

* * * * *

UNITED STATES PATENT OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 3,867,501
DATED : February 18, 1975
INVENTOR(S) : James M. Powers and Roger L. Manning

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

In the identification of the inventors: Change "James W." to
--James M.--.

Col. 1, Line 30 After "separate" insert --individual--.

Signed and sealed this 6th day of May 1975.

(SEAL)

Attest:

RUTH C. MASON
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents
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